

**APPLICATION FOR LETTERS PATENT OF  
THE UNITED STATES OF AMERICA**

**Title:** **HAIR CURLER DEVICE**

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## **HAIR CURLER DEVICE**

### **Background of the Invention**

#### **Field of the Invention**

The present invention relates to curlers for the hair of humans and animals and more particularly, but not limited to hair curlers for young, pre-teen, teenage and adolescent females that will increase their enjoyment of curling their hair or having their hair curled.

#### **Description of the Prior Art**

Hair curlers or hair rollers (referred to hereinafter as hair curlers or simply curlers) are commonly used to form semi-permanent curls in the hair of humans or animals. Typically, hair curlers are formed as short cylindrical elements, such as metal or plastic rods or tubes, open-cell or closed-cell foam rods and the like. Curlers come in a variety of diameters for forming "tight" or "loose" curls depending on the particular hair style or fashion that a person desires or that is in vogue at the time.

Although the use of hair curlers is often carried out as part of an every day private female toilette, it is not uncommon for females to use curlers in the company of others, particularly in the pre-teen and teenage groups. It is also not uncommon nowadays to see females in public places with their hair in curlers. Some users view the use of hair curlers as a relatively tedious, albeit necessary task for maintaining an attractive hairdo. Occasionally, however, a young female may balk at the prospect of having to endure hair curlers in her hair for the first time, or at any time.

Ordinarily, hair curlers are constructed as purely functional devices and none of the features of those devices promote or encourage the use of hair curlers, particularly in the aforementioned young, pre-teen and teenage groups. One exception is the hair roller disclosed in U.S. Design Patent No. 210,436 to Jeronimus, which is a cylindrical tube with a colored, ornamental, two-dimensional design imprinted or otherwise applied to the circumferential surface of the tube. Apart from the merely ornamental two-dimensional hair curler designs of the type disclosed in the aforesaid design patent, nothing heretofore has made the task of applying curlers to the hair an especially pleasant, satisfying or rewarding experience.

It would be desirable therefore to provide a hair curler device, the functional components of which are constructed so as to promote and encourage the use of hair curlers, especially by young, pre-teen and teenage females.

### **Summary of the Invention**

In view of the foregoing limitations and shortcomings of the prior art hair curlers, as well as other disadvantages not specifically mentioned above, it should be apparent that there still exists a need in the art for hair curlers which are especially designed and constructed to appeal to females, especially young, pre-teen and teenage females, as well as to effectively perform the function of curling the hair. There is also a continuing need in the art to expand the possibilities for the construction of hair curlers to eliminate, or at least to reduce, the tedium of using them.

The present invention fulfills those needs by combining an animal form with a hair curler. This combination is especially suited to the tastes of young, pre-teen and teenage females; significantly more so than the non-ornamental hair curlers which are commonly in use today by females, both young and older, adult females. The hair curler of the present invention is provided with structural features, which allow effective curling of the hair and encourage the use of the hair curler, especially in young, pre-teen and teenage females. The design of the hair curler makes it appear as though the animal itself has taken up repose in the hair of the user.

According to a first embodiment of the hair curler of the invention, a cylindrical rod formed of plastic or foam forms the body portion of an animal form, such as a squirrel, rabbit, cat, kitten, bird, reptile, spider or any other animal form. An animal head molded of plastic, for example, is fixedly mounted at one end of the rod and the animal forelegs, hind quarter and hind legs, also molded of plastic in the form generally of a segment of a cylindrical tube, are pivotably mounted to the other end of the rod. The animal tail is attached to the hind quarter of the animal form. The tail may be molded in plastic with the hind quarter, but is preferably a separate, flexible and bendable element. To use the hair curler, the pivotable portion of the animal form is pivoted away from the body portion and the hair to be curled is wrapped about the body portion in the same manner that hair is wrapped about a conventional

hair curler. The pivotable portion is then pivoted toward the body portion and latched to the animal head to grip and hold the hair in place about the body portion until the hair is set with a curl. The tail may be formed of a fibrous material covering and being supported by two or more twisted wires similar to a conventional pipe cleaner and used as a secondary hair curler. An especially suitable animal form for the first embodiment of the invention is that of a squirrel.

In a second embodiment of the invention, the body of the animal form comprises a conventional curler having a cylindrical shape, e.g., a mesh covered coil spring surrounding a bristle brush element. At one end of the curler, an animal head/forelegs form is attached and at the other end of the curler, an animal hind quarter/hind legs form is attached. The animal head and hind portion forms for this embodiment may be formed of a molded plastic material with cylindrical plugs for insertion in the respective open ends of the curler body portion. A conventional plastic pin may be used to secure the hair on the animal form curler by passing through the hair and penetrating the curler body in a conventional manner.

The animal hind portion form of the second embodiment may also include an animal tail of the type described in the first embodiment. Alternatively, the animal tail may comprise a metal or plastic clip pivotably attached to the hind portion of the animal form with an over-center mechanism or a spring bias for securing the hair in place on the curler body after the hair has been wrapped about the curler body. This form of the animal tail is especially suitable for use with a curler body that is not intended to be penetrated by a plastic pin as described above, for example, a curler body made of a metal or plastic tube or a cylindrical rod of plastic or foam material.

It is also possible to incorporate the features of the animal form hair curler of the invention in other types of hair curlers, including electrically heated curlers. As a further feature of a heated animal form hair curler, one of the animal head or hind portions may be provided with a thermochromic material to indicate by a color change when the curler has reached a desired temperature or cooled below a desired temperature. In a specific example, the eyes of the animal head form may be coated with a thermochromic material. Such thermochromic materials and the application thereof are well known in the temperature measuring arts.

The hair curler of the present invention is uniquely suited for utilizing the animal form of the squirrel. Using the squirrel form in the first embodiment, the front teeth of the squirrel form may be used to latch the pivotable portion to the animal head portion and secure the hair in the curler. For both embodiments, a squirrel tail made from a flexible and malleable material may be advantageously used as an additional hair-curling element for forming tight, small diameter curls.

With the foregoing and other advantages and features of the invention that will become hereinafter apparent, the nature of the invention may be more clearly understood by reference to the following detailed description of the invention, the appended claims and the views illustrated in the drawings.

#### **Brief Description of the Drawings**

**FIG. 1** is a perspective view showing the animal form hair curler of the present invention in use on the hair of a female;

**FIG. 2** is a front elevation view of the animal form hair curler of **FIG. 1**;

**FIG. 3** is a transverse cross-sectional view taken along line 3-3 of **FIG. 2**;

**FIG. 4** is a transverse cross-sectional view taken partly along line 4-4 of **FIG. 3**;

**FIG. 5** is a front elevation view of the animal form hair curler of **FIG. 2** showing the hair curler in the pivoted open position for receiving hair about the curler body;

**FIG. 6** is a front elevation view of another embodiment of the animal form hair curler of the invention; and

**FIG. 7** is a fragmentary top view showing an alternate embodiment of the tail element of the animal form hair curler of the invention.

#### **Detailed Description of the Invention**

Referring now in detail to the drawings, **FIG. 1** illustrates in perspective one embodiment of the animal form hair curler 10 of the invention applied to the hair H of female user F. It will be appreciated that the hair curler 10 differs substantially from conventional hair curlers in that its operative components have the form of an animal body.

**FIGS. 2-5** illustrate a first embodiment of the animal form hair curler 10 of the

invention. The curler 10 comprises a first cylindrical body portion 12 of a diameter and length suitable for forming a hair curl. Body portion 12 may be formed of plastic, foam or other material. An animal head portion 14, in this case, in the form of a squirrel's head, is attached, e.g., by adhesive bonding, to one end of the body portion 12. A second animal body portion 18, comprising a forelegs portion 20, a curved underbody portion 22 and a hind quarter/hind legs portion 24, is pivotably attached by pins 26 to the other end of the cylindrical body portion 12. The animal head portion 14 and the second animal body portion 18 may be molded of a suitable plastic. It will also be appreciated that the animal head portion 14 may be formed with a cylindrical plug of a diameter sufficient to be inserted in one end of a tubular body portion 12.

A tail portion 28 is attached to the hind portion 24. Preferably, the tail portion is in the form of a fibrous material supported on a bendable wire. The tail portion 28 may also be formed of plastic molded in one piece with the body portion 18 or attached to the body portion 18 by adhesive or other suitable means.

**FIG. 5** illustrates the hair curler 10 in the pivoted open position for wrapping a portion or lock of the user's hair about the cylindrical body portion 12. As shown in **FIGS. 3 and 4**, the curved underbody portion 22 is spaced from the cylindrical body portion 12 in the pivoted closed position so as to accommodate the hair of the user. After the hair is wrapped about the cylindrical body portion 12, the second body portion 18 is pivoted closed to secure the hair on the curler. The curved underbody portion 22 and the head portion 14 are provided with interlocking lips 30, 32 which interengage as shown in **FIG. 4** to latch the second body portion 18 to the head portion 14 when they are pivoted to the closed position shown in **FIG. 1** to hold the hair in the curler. The tail 28 may also be used to form hair curls by wrapping a lock of hair about the tail and bending the tail so as to grip the lock of hair and hold it in place. If the hair curler 10 is in the form of a heatable curler, a portion of the animal form, such as the eyes 34 of the head portion, may be a thermochromic material coated or otherwise applied to the eyes. The selected color change temperature for the thermochromic material may be set to change when the curler is heated to an appropriate temperature or cools down to a selected temperature.

Referring to **FIG. 6**, a second embodiment of the hair curler of the invention is shown

and designated by reference numeral 40. Hair curler 40 comprises an animal body portion 42, which is preferably in the form of a conventional tubular hair curler, e.g., comprising a mesh covered coil spring surrounding a bristle brush element. An animal head portion 44 is attached to one end of the body portion 42, preferably by means of a cylindrical plug (not shown) on the head portion that fits into the tubular body portion. An animal hind portion 46 is attached to the other end of the body portion 42, preferably in the same manner as the head portion is attached. The head and hind portions 44, 46 may be molded of a plastic material. In this embodiment, the animal form is that of a rabbit, it being understood that any other animal form may be used. The second embodiment of the hair curler is used by wrapping a portion of hair around the body portion several times and then passing a plastic pin 48 through the hair and through the body portion in a conventional manner.

**FIG. 7** illustrates an alternate hair curler 50 of the invention that is useful for hair curlers with a body portion 52 made, for example, of a plastic tube or rod or a metal tube. In this embodiment, the hind portion 54 of the animal form is attached to the body portion 52 by any suitable means, e.g., the plug arrangement described above or by bonding the body portion 52 in a bore in the animal head or hind portion.

The animal tail portion 56, e.g., a squirrel tail, is pivotably attached (as at 58) to the hind portion 54 so as to be pivoted from an open position shown partially by dash-dot lines in **FIG. 7** to a closed position with the tail portion 56 bearing against the body portion 52 to hold the hair wrapped about the body portion. Preferably, the pivot 58 is an over-center mechanism or is spring-biased so as to cause the tail portion to be urged to the closed position against the force of the over-center mechanism or a spring. In this way the tail portion 56 functions as a clip to hold the hair in place on the curler.

Although certain presently preferred embodiments of the present invention have been specifically described herein, it will be apparent to those skilled in the art to which the invention pertains that variations and modifications of the various embodiments shown and described herein may be made without departing from the spirit and scope of the invention. Accordingly, it is intended that the invention be limited only to the extent required by the appended claims and the applicable rules of law.